

CLAIM AMENDMENTS

Please amend the claims in accordance with the following listing of claims:

Listing of Claims

1-9. (Cancelled)

10. (Currently Amended) A synthesis method of alanylglutamine, comprising the steps of:

1) Formation of active ester by the reaction of 10 mmol N-terminal protected alanine, $[[10\sim30]]$ about 10 to about 30 mmol of triphenylphosphine and $[[10\sim30]]$ about 10 to about 30 mmol of hexachloroethane, in organic solvent for about 20 $[[\text{min}\sim3]]$ minutes to about 3 hours, and reaction temperature is $[[-5\sim30^{\circ}\text{C}]]$ about -5 to about 30°C ;

2) In a liquid mixture made by mixing organic solvent and aqueous solution of inorganic base, the active ester obtained from step 1) reacts with $[[10\sim30]]$ about 10 to about 30 mmol of glutamine to form the N-terminal protected alanylglutamine, wherein the volume ratio of organic solvent and aqueous solution of inorganic base is $[[0\sim4]]$ about 0 to about 4, reaction temperature is $[[-5\sim30^{\circ}\text{C}]]$ about -5 to about 30°C , and pH is controlled at ~~8.5~13~~ about 8.5 to about 13;

3) Acidify the reaction mixture of step 2) with inorganic acid to $\text{pH}\leq 3.0$; and

4) The alanylglutamine is obtained by removing the N-terminal protecting group ~~with deprotecting reagent~~.

11. (Currently Amended) The synthesis method of alanylglutamine according to claim 10, wherein:

1) Formation of active ester by the reaction of 10 mmol of N-terminal protected alanine, $[[15\sim20]]$ about 15 to about 20 mmol of triphenylphosphine and $[[15\sim20]]$ about 15 to about 20 mmol of hexachloroethane in organic solvent for $[[1.5\sim2]]$ about 1.5 to about 2 hours, and reaction temperature is $[[0\sim10^0\text{C}]]$ about 0 to about 10^0C ;

2) In a liquid mixture made by mixing organic solvent and aqueous solution of inorganic base, the active ester obtained from step 1) reacts with $[[15\sim20]]$ about 15 to about 20 mmol of glutamine to form N-terminal protected alanylglutamine, wherein the volume ratio of organic solvent and aqueous solution of inorganic base is $[[0.5\sim2]]$ about 0.5 to about 2, reaction temperature is $[[5\sim10^0\text{C}]]$ about 5 to about 10^0C , and pH is controlled at $[[9.5\sim10.5]]$ about 9.5 to about 10.5;

3) ~~Alanylglutamine is obtained by~~ acidifying the reaction mixture of step 2) to $[[\text{pH}=2.0\sim3.0]]$ a pH of about 2.0 to about 3.0.

12. (Previously Presented) The synthesis method of alanylglutamine according to claim 10, wherein N-terminal protected alanine is N-(O,O-dimethyl) phosphoalanine (DMP-L-Ala), N-(O,O-diethyl) phosphoalanine (DEP-L-Ala), N-(O,O-diisopropyl) phosphoalanine (DIPP-L-Ala), N-(O,O-di-n-butyl) phosphoalanine (DBP-Ala), carbobenzoxyalanine (Z-L-Ala), (para-carbomethoxy) carbobenzoxyalanine (MZ-L-Ala), tert-butylcarbonylalanine (Boc-L-Ala), or 2-(dibiphenyl) isopropylcarbonylalanine (Bpoc-L-Ala).

13. (Previously Presented) The synthesis method of alanylglutamine according to claim 10, wherein the organic solvent used in step 1) is selected from the group consisting of dichloromethane, toluene, tetrahydrofuran, acetonitrile or 1,2-dichloroethane.

14. (Previously Presented) The synthesis method of alanylglutamine according to claim 11, wherein the organic solvent used in step 1) is selected from the group consisting of dichloromethane, toluene, tetrahydrofuran, acetonitrile or 1,2-dichloroethane.

15. (Currently Amended) The synthesis method of alanylglutamine according to claim 10, wherein the organic solvent used in step 2) is selected from the group consisting of ethanol, ethyl acetate, ~~petroleum~~ petroleum ether, cyclohexane, toluene and dichloromethane.

16. (Currently Amended) The synthesis method of alanylglutamine according to claim 11, wherein the organic solvent used in step 2) is selected from the group consisting of ethanol, ethyl acetate, ~~petroleum~~ petroleum ether, cyclohexane, toluene and dichloromethane.

17. (Previously Presented) The synthesis method of alanylglutamine according to claim 10, wherein the inorganic base used in step 2) is selected from the group consisting of sodium hydroxide, potassium hydroxide, sodium bicarbonate, potassium bicarbonate, sodium carbonate and potassium carbonate.

18. (Previously Presented) The synthesis method of alanylglutamine according to claim 11, wherein the inorganic base used in step 2) is selected from the group consisting of sodium hydroxide, potassium hydroxide, sodium bicarbonate, potassium bicarbonate, sodium carbonate and potassium carbonate.

19. (Previously Presented) The synthesis method of alanylglutamine according to claim 10, wherein the inorganic acid used in step 3) is selected from the group consisting of hydrochloric acid, sulfuric acid, nitric acid and phosphoric acid.

20. (Previously Presented) The synthesis method of alanylglutamine according to claim 11, wherein the inorganic acid used in step 3) is selected from the group consisting of hydrochloric acid, sulfuric acid, nitric acid and phosphoric acid.

21. (Currently Amended) The synthesis method of alanylglutamine according to claim 10, wherein the N-terminal protecting group ~~deprotective reagent~~ is ~~selected from the group consisting of~~ removed by at least one of trifluoroacetic acid, hydrogen chloride/glacial acetic acid, hydrogen bromide/glacial acetic acid, methyl sulfonic acid, hydrogenation reduction, hydrogen chloride/1,4-dioxane, or hydrogen bromide/1,4-dioxane.

22. (Currently Amended) The synthesis method of alanylglutamine according to claim 11, wherein the N-terminal protecting group ~~deprotective reagent~~ is ~~selected from the group consisting of~~ removed by at least one of trifluoroacetic acid, hydrogen chloride/glacial acetic acid, hydrogen bromide/glacial acetic acid, methyl sulfonic acid, hydrogenation reduction, hydrogen chloride/1,4-dioxane, or hydrogen bromide/1,4-dioxane.

23. (Currently Amended) The synthesis method of alanylglutamine according to claim 10, wherein step 2) is accomplished as follows: the active ester obtained from step 1) reacts with glutamine in a stirring liquid mixture containing organic solvent and aqueous solution

of inorganic base, and stirring and the condition of ~~pH=9.5-10.5~~ about 9.5 to about 10.5 must be maintained in the course of reaction.

24. (Currently Amended) The synthesis method of alanylglutamine according to claim 11, wherein step 2) is accomplished as follows: the active ester obtained from step 1) reacts with glutamine in a stirring liquid mixture containing organic solvent and aqueous solution of inorganic base, and stirring and the condition of ~~pH=9.5-10.5~~ about 9.5 to about 10.5 must be maintained in the course of reaction.